

the bird is protected from April or May till October. For the Wood Duck there is a close season of greater or less length in Canada, in all of the Northern States except Kansas, in all of the Pacific States, but in only five of the thirteen Southern States. In a number of the Northern States and in several of the Provinces of Canada, the Wood Duck is protected from spring shooting. "If spring shooting," says Dr. Fisher, "be abolished the Wood Duck will gradually return to its old haunts and by degrees reestablish itself—to the joy and satisfaction of all lovers of nature."—J. A. A.

Job's 'Among the Water-Fowl.'—The title¹ of this interesting work very fully indicates its general character, that of a 'popular narrative' from personal study of the birds in their haunts, with photographs of the birds and their nests from nature, obtained often at the expense of considerable hardship and risk. The matter is arranged under five subheadings, as follows: 'Part I. The Submerged Tenth: Grebes and Loons.' 'Part II. Modern Cliff-Dwellers: Gannets, Guillemots, Auks, Puffins, Kittiwakes, etc.' 'Part III. Ocean Wanderers: Shearwaters, Jaegers or Skuas, Petrels, Phalaropes.' 'Part IV. The White-winged Fleet: Gulls and Terns.' 'Part V. Wild Fowl of Wild Fowl: Ducks and Geese.'

As is well known to a wide circle of ornithologists, Mr. Job is indefatigable in his pursuit of the wild fowl, and patient almost beyond measure in his work with the camera under varied and trying conditions, and his liberal mead of success, both as an observer and in bird photography has been well earned. His field of work includes the lakes and marshes of North Dakota, the islands of the St. Lawrence, and the off-shore waters of the Atlantic coast, from Massachusetts to Nova Scotia, besides the ordinary fields and inland waters of the northeastern States and southeastern Canada. He here lays before the reader in the form of a simple narrative the results of his years of exploration and experience with the varied tribe of wild water fowl, from Grebes to Ducks, Geese and Phalaropes. Aside from its interest to the bird-lover, his 'Among the Water-Fowl' is an important contribution to the life-histories of many species none too well-known, and the most difficult to investigate, owing to the inaccessibility of their haunts, and the special preparation and long journeys necessary to reach them and successfully cultivate their acquaintance.

¹Among the Water-Fowl: Observations, Adventure, Photography. A popular Narrative Account of the Water-Fowl as found in the Northern and Middle States and Lower Canada, east of the Rocky Mountains. By Herbert K. Job. Profusely illustrated by photographs from Nature, mostly by the Author. New York: Doubleday, Page & Co. 1902. Square 8vo, pp. xxi + 224, with numerous half-tone cuts and plates. Price, \$1.35 net.

The half-tone pictures, nearly one hundred in number, add immensely to a clear conception of the breeding haunts and habits of a large number of species the ordinary observer can hardly hope to be able to study in life.—J. A. A.

Witherby on the Migration of Birds.¹—Mr. Witherby sets forth at some length, in a popular way, many well-known facts about bird migration. "None of the many theories" professing to answer the questions of what causes migration, what first led birds to migrate, and how they find their way, are, to him, in any way satisfactory; "the more," he says, "we study the matter, and the more we learn, the more difficult does it become to adopt any of the theories, fascinating and plausible though many of them are." But he believes that the collecting and sifting of information, now going on, "will lead us almost imperceptibly towards the discovery of this mystery of mysteries"! When discovered, what an aching void there will be for those who love mysteries!—J. A. A.

Shufeldt on the Osteology of the Psittaci.²—The views of several leading authorities on the classification of the Psittaci are quoted at some length (pp. 399-405), and then follows an account of the osteological characters of the Carolina Paroquet, this part of the paper being a revision, with some additions, of his paper on the same subject published in 1886, to which is added (pp. 419, 420) 'Observations upon the Osteology of the Owl Parrot (*Stringops habroptilus*). The nine figures forming the four half-tone plates represent the skeleton of *Stringops* and the skulls of *Conurus carolinensis*, *Ara militaris*, and *Cacatua galerita*, and the trunk skeletons and some other bones of *Conurus* and *Cacatua*, the sternum and shoulder girdle of *Calyptorhynchus*, and the humeri of *Cacatua*.—J. A. A.

Strong on the Metallic Colors of the Feathers of the Neck of the Domestic Pigeon.³—The so-called metallic colors and iridescent effects of feathers have been generally explained as diffraction phenomena. Dr. Strong states that the hypothesis based on the supposed presence of striae and ridges is "inapplicable to this case when one finds that the feather may be rotated through a whole circle with essentially the same color effects for given angles even from individual barbules. Furthermore, a careful microscopic study of the barbule surface shows that irregularities

¹The Migration of Birds. By H. F. Witherby, F. Z. S., Member of the British Ornithologists' Union. Separate, pp. 16, reprinted from 'Chambers Journal.'

²Osteology of the Psittaci. By R. W. Shufeldt. Annals Carnegie Museum, Vol. I, 1902, pp. 399-421, pll. xxi-xxiv.

³The Metallic Colors of Feathers from the Neck of the Domestic Pigeon. By R. M. Strong. Biolog. Bull., Vol. III, 1892, pp. 85-87.